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ON THE

DISEASES OF THE TEETH;

THEIR

ORIGIN EXPLAINED,

WITH

SUCCESSFUL METHODS OF REMOVING THEIR MOST PREVAILING DISORDERS, AND MANAGING THE TEETH IN THE INFANT STATE.

TO WHICH ARE ADDED,

OBSERVATIONS ON THE SALIVA.

BY BENJAMIN WALKEY,
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APOTHECARY, AND PROPRIETOR OF THE VEGETABLE DENTIFRICE.

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INTRODUCTION.

WE may conſider the teeth conſtructed by Providence to anſwer three great and eſſential purpoſes; to heighten the ſymmetry of man's features, to produce perfect ſpeech, and to be a primary cauſe of the health, ſtrength, and animation of the body, by dividing his food for the proceſs of digeſtion.

Experience teaches us, that theſe inſtruments of Nature are not renewable, after a certain period of life; the loſs, therefore, of a part ſo ornamental and uſeful to our frame, cannot be too much deplored, nor too anxiouſly guarded againſt; ſince with their deſtruction, the beautiful ſymmetry of the human countenance is deranged, articulation becomes imperfect, and the vigour of the conſtitution is undermined; for the power of maſtication being loſt, the very groundwork of digeſtion is weakened.

According to theſe axioms, the vigour or decay of the human conſtitution depends on the healthful or declining ſtate of the teeth; and by viewing the ſubject in this light, its importance is conſiderably raiſed in our eſtimation, inaſmuch as the health and happineſs of Man appears to be connected with it. Daily experience convinces us of the deſtructive ravages ariſing from the diſeaſes of the teeth. At one time they are ſeen to deſtroy beauty, and impair health; and at another, to bring their emaciated victims to the grave. In truth, neither infancy, youth, manhood, nor old age, are exempted from their multiform complaints.

This melancholy, yet truly deſcriptive, picture of their ravaging complaints, demonſtrates the uſefulneſs of the preſent enquiry. And though my efforts to inveſtigate the ſource of theſe diſeaſes may prove unequal to the taſk, and the following pages fall infinitely ſhort of thoſe expectations the too ſanguine reader, or the more learned critic, may cheriſh, yet a future good may be derived from them. Some more enlightened pen may purſue the ſubject, and by his knowledge more happily contribute to the benefit of mankind; nor ſhall I envy him the well-earned fame, as my happineſs will conſiſt in having forwarded the work, by trying my confined abilities to alleviate the ſufferings ſo often experienced, even in this age of learning and refinement.

BRITISH MUSEUM

TO THE

LADIES

OF

GREAT BRITAIN.

EMBOLDENED by the ſanction you are pleaſed to beſtow on my Vegetable Powder, for removing diſeaſes of the Teeth and Gums, I have, with great deference, dedicated the following pages to you, truſting that their peruſal will not only be productive of general benefit to the Fair, but be found particularly uſeful to thoſe who are filling the honourable departments of Mothers, or Guardians of Youth.

I have the honour
To ſubſcribe myſelf
The PUBLIC's
Moſt obedient
Humble ſervant,
The AUTHOR.

ON THE

ORIGIN

OF THE

DISEASES OF THE *TEETH.*

It is the intention of the following pages to prove the Teeth ſubject to diſeaſes of a particular nature; not ariſing from their expoſure to the immediate effects of attrition, or the qualities of our food during maſtication, but deriving their ſources from other cauſes not ſo much ſuſpected.

Theſe diſeaſes will be conſidered in

two points of view; the one Conſtitutional, the other Artificial.

In their diſcuſſion, ſcientific terms are much diſregarded; perſpicuity being conſidered of more conſequence to the reader than the idle parade of uninſtructive technical terms, ſince theſe lines are rather addreſſed to the generality of mankind, than to the learned medical profeſſor.

Their Origin conſidered as Conſtitutional.

By a ſtrict attention to the mode Nature adopts in the formation of bone in the earlieſt days of infancy, there is great reaſon to believe many of the diſeaſes, which follow the neglect of this obſervation, would be cut off at their ſource, and a conſtitution by this means rendered ſtrong and vigorous, which would otherwiſe be the ſeat of debility and declining health.

On this ground it is ſtrongly recommended to every parent to watch the formation of the Teeth. The proceſs is either a ſignal of future miſchief, or a proof of vigorous health in every infant.

As ſoon as the teeth are therefore paſſed through the gums, if they have diſeaſed appearances, as a degree of roughneſs, blackneſs, or marks of eroſion on them, application ſhould be made to the ableſt medical profeſſors; ſince theſe ſymptoms are to be conſidered at this period as ſtrong proofs of diſeaſed ſtamina.

If the conſtitution be not attended to

before the diſeaſe is ingrafted in it, the ill effects of the neglect will moſt probably be evident on the production of the ſecond ſet of teeth, when they will not only be diſcoloured, but often of a brittle or ſoft texture.

It is not always an eaſy taſk to eradicate the cauſe of theſe diſeaſed appearances, even when the earlieſt precaution is taken; by delay the difficulty muſt be increaſed. Indeed, experience often proves the beſt-directed efforts to relieve abortive, on the production of the ſecond ſet.

In the Introduction, an endeavour has been made to impreſs the mind of the reader with the great and beneficial purpoſes intended, by the conſtruction of theſe inſtruments of Nature, and to point out, that the ſet produced about the ſeventh year, is Nature's laſt gift, and well worth the attention of a parent.

As if Nature knew the neceſſity of allowing a reſpite to the conſtitution, after the formation of the milky teeth, to recover itſelf from the ſhock; a ſpace of almoſt ſeven, and in ſome inſtances eight, years paſs before the ſecond ſet begin to emerge from the alveory proceſſes or ſockets.

It is this interval that ſhould be employed in correcting the habit, deranged by a prevalent Acid, acting deſtructively on the operations of Nature.

But let us examine whether there are juſt grounds for preſuming an Acid to be the exciting cauſe of diſeaſed teeth in the infant ſtate, before we enter on the method of cure.

A diſeaſe is conſidered that particular ſtate of the conſtitution, conſiſting in an unnatural ſtructure, or an interruption of ſome of the organs of the body; while health is ſaid to depend on a perfect ſtructure, and an uninterrupted diſcharge of all the organic parts.

Theſe poſitions being granted, it is preſumed, that to produce a perfect infantile ſtructure, there muſt be an equal action in the various organs of the frame, and a due union and proportion of every principle conſtituting it; if a diſproportioned action or principle exiſts in it, the conſequence muſt be ſome derangement or other.

For inſtance, let us imagine an exact

union of Acid and Alkali, forming in a habit a perfect third body, on which the health of it depends. Will not every deviation from this exact neutralized ſtate conſtitute proportional diſeaſe?

We ſhall find, by applying this mode of reaſoning, if an acid be prevalent in the infantile conſtitution, it will act by exciting the very ſymptoms deſcribed: as thus; in the formation of a tooth it will act by diſuniting the earthy particles of the oſſeous matter to be depoſited on the pulp, the groundwork of the tooth; and by this property cauſe the proceſs to be delayed, until Nature, or Art, has ſo neutralized the acidity, as to ſuffer the natural proceſs to proceed; and then, perhaps, not without indelible marks of its pernicious effects.

As proofs of the doctrine, the following obſervations are introduced :

When we perceive a child, whoſe head and forehead is preternaturally enlarged, the ſutures and fontanelle not uniting at a proper period, while the joints are enlarged, and the bones, in ſome caſes, curvated, do we not acknowledge there is a principle in the habit deſtroying the power which unites their earthy particles ?

Nay, more ; where a diſproportioned principle of this nature exiſts, is not the vis vitæ obſerved to be languid, with an imperfect power to generate oſſeous matter? and does not the difficult dentition, with the ſymptoms of a debilitated declining conſtitution, attend it ?

And do we not find languor, inertneſs, and paleneſs of countenance marking out the adult, in whom an acid ferment prevails in the ſtomach, the certain cauſe of an imperfect digeſtion, and conſequent ill health?

Laſtly, to prove this doctrine is not built on mere fiction, it is neceſſary to mention, that experimental facts have taught us the power of acids to diſſolve bony matter out of the body. Indeed, every anatomiſt has well aſcertained the effects of the acid of ſea ſalt, in deſtroying oſſeous or bony particles.

If theſe aſſertions are founded on truth, we may reaſonably conclude, that amidſt the devaſtations of an acid on the general ſtamina, the formation of the teeth does not elude the effects of it; at leaſt it does not occur to me, Nature has particularly guarded them againſt its effects. On the contrary, the opinion appears to be confirmed from conſidering their ſituation.

They are formed, if the expreſſion may be allowed, in the boſom of the ſalivary ducts, and therefore muſt be expoſed, from the earlieſt part of their creation, to the effects of a diſeaſed ſaliva; and thence more likely to indelible diſeaſes, from a prevalent acid, than the other bones.

This is a truth not to be confuted; for while the effects of a deleterious Acid on the bones of the extremities, during infancy, are often remedied by a well-directed plan of diet and medicinal treatment: neither Nature nor Art remedies the diſeaſes deſcribed, when they occur in the milky teeth; nor do they exert more beneficial influence on the ſecond ſet, in many inſtances, when the wholeſome precaution is neglected to eradicate the cauſe, while the opportunity offers.

In advancing that a prevalent Acid is the general ſource of diſeaſed teeth in infancy, it is not pretended to deny the exiſtence of others. For inſtance, the ſame diſeaſes will ariſe in the offspring of a parent, in whom the venereal virus is not wholly extinguiſhed; and in this caſe they can only be cured by their particular antidote, mercury; but this is rather to be conſidered as an accidental than a general cauſe.

From theſe conſiderations, ſtrengthened by a ſucceſsful practice, the concluſion is drawn, that the formation of healthful teeth generally depends on a due union of Acid and Alkali in the conſtitution.

Their Origin conſidered as artificial.

It now remains to prove the power of producing the ſame morbid appearances at a more advanced period of life, even in conſtitutions where the moſt perfect teeth are formed.

The following inſtances are ſelected from various caſes which have occurred in practice, in ſubjects, after the completion of the ſecond ſet, from the age of twenty, and older.

In ſome, the enamel of the teeth was found more or leſs deſtroyed, and the bone, in ſome few caſes, expoſed, the

the colour of the teeth inclining to a yellow or dark aſh colour. In others, the teeth nearly reſembled the colour of Portland ſtone, a dead unpoliſhed white, attended with a ſenſe of roughneſs to the lips in paſſing over them; while others complained of a ſenſe of uneaſineſs in the alveory proceſſes or ſockets, and of their breaking during maſtication; alſo ſeveral inſtances have occurred of the teeth decaying inſenſibly away in ſubjects, not having attained their twenty-third year, in whom there appeared no evident marks of indiſpoſition.

The great ravages of theſe alarming complaints, in a part ſo neceſſary to health, excited my particular attention to diſcover their ſource.

By frequently reflecting on the ſubjects moſt ſeverely afflicted by them, the remark was drawn, that theſe diſorders were not confined to the invalid or aged, but that they were moſt prevalent in ſuch as were in the full poſſeſſion of youth and health; and particularly in thoſe who were in the daily habit of taking great care of their teeth. Theſe peculiarities led me to conſider their ſource neither ariſing from natural nor common cauſes. To eſtabliſh the truth or falſehood of this ſuſpicion in my own mind, the various ſubſtances introduced into compoſitions for the preſervation of teeth, were analyſed, and the reſult of theſe inquiries are ſubmitted in the following pages.

Subſtances forming Dentifrices in general.

The ſubſtances forming the baſis of preparations for preſerving the teeth are abſorbent or calcareous earths, united with a mineral acid, or ſaline preparation, artfully intermixed with ſome vegetable, as Bark, Orris, or Marſhmallow root, to conceal the hidden deſtructive principle on which they act, coloured with Roſe Pink, Carmine, or Cochineal, and often perfumed with an eſſential oil.

Sometimes the noxious preparation is not coloured by art, but ſimply exhibits its calcareous or grayiſh pearl colour, in combination at one time with a Mineral Acid, at another with Cryſtals of Tartar, or Pumice Stone.

Obſervations on the Actions of theſe Subſtances.

The action of abſorbent or calcareous earths depends on their mode of preparation. When levigation is made uſe of for their reduction into powders, they act by the power of friction; for they are in their ſubtileſt ſtate, minute, angular points, and inſoluble in water. When fire is uſed in the proceſs, they become ſoluble in water, but then they acquire a cauſtic quality, the fixed air being driven from them by the action of the fire.

The effects of acids on the bones of animals are to deſtroy the principle uniting their earthy particles, and render them ſoft and brittle.

Cryſtals of tartar are a peculiar acid united to the Vegetable Alkali; but as the Acid is manifeſtly predominant, it muſt be prejudicial to the enamel of the teeth.

Pumice Stone is a half vitrified body, a lava from Mount Veſuvius, poſſeſſing a ſlow but certain deſtruction of the teeth, acting by mere mechanical friction.

As eſſential oils often enter theſe compoſitions, I ſhall juſt mention they principally conſiſt of Acid and Phlogiſton. They derive their name from poſſeſſing eſſential parts, which are ſharp, pungent, aromatic, and volatile in the heat of boiling water, and on theſe accounts unfit for ſuch purpoſes.

If ſuch are the effects of theſe ſubſtances in a ſtate of ſeparation, a truth the informed medical profeſſor cannot deny, what muſt be their deleterious power in a ſtate of union?

No neutralization in their union by compoſition takes place, as happens between a fixed Alkali and a Vegetable Acid; on the contrary, each principle remains diſtinct. Of this truth it is in the power of any individual to be convinced, by applying a portion of ſome Dentifrices to the tongue, when the Acid will be plainly diſtinguiſhed from the calcareous matter. It is manifeſt, then, that their actions, when compounded, are of a twofold nature, viz. friction and decompoſition. By the firſt quality they deſtroy the enamel of the teeth; and by the ſecond, the union of their earthy particles.

The reſult of my inquiries are now candidly delivered, and may ſociety in general derive benefit from them.

MODES OF CURE.

THE different periods at which the diſeaſes of the teeth make their appearance, render it neceſſary to adopt different modes of treatment.

When the milky teeth are affected by blackneſs, roughneſs, or eroſion, we are to conſider theſe appearances as the characteriſtic marks of a diſeaſed conſtitution, often requiring the knowledge of a medical practitioner to remedy.

But ſince there is ſometimes a difficulty in procuring medical aſſiſtance in particular ſituations of the country, and where ſuch caſes are too often neglected from the want of properly reflecting on their miſchievous tendency, until little redreſs can be obtained from art, the following directions are ſubmitted for the benefit of individuals.

A rational attempt to remove theſe diſeaſes may be made by ſtrengthening the habit in general, by adopting a tonic ſyſtem, while the diſpoſition in Nature to convert every thing into an Acid is to be oppoſed by a well-directed diet, aided by ſuch medicines as will gradually deſtroy the prevailing diſpoſition.

The firſt intention may be accompliſhed by ſtrengthening the conſtitution by frictions of the whole body with dry flannels, and by cold bathing; or by expeditely waſhing the child night and morning with a ſpunge dipped in cold water, in which Bay Salt has been previouſly diſſolved; and by gentle daily exerciſe taken in an horizontal poſture, in the nurſe's arms.

The ſecond intention may be obtained by giving the following mixture, occaſionally adminiſtering three, four, or more grains of rhubarb, whenever the bowels of the infant indicate the uſe of it.

Take Decoction of Bark, three ounces;
Prepared Natron, ten grains;
Syrup of Capillaire, a pap ſpoonful;

Mix, and give a pap-ſpoonful three times in a day.

But there are inſtances where children cannot be prevailed on, after a certain age, to take liquid medicines; in ſuch caſes the following powders are recommended:

Take Ruſt of Iron prepared, two or three grains;

Rhubarb in powder, one grain;

Sugar Candy, ten grains;

Mix, for a powder to be given night and morning in a pap-ſpoonful of any ſimple vehicle.

Or, Extract of Bark, two grains;

Prepared Natron, one or two grains;

Sugar Candy, ten grains;

Mix, for a powder to be given as above, carefully diſſolved in a ſmall quantity of ſimple vehicle.

Or, Calcined Zinc, two grains;

Aromatic Powder, ten grains;

Compound powder of Crab's claws;

Sugar Candy, of each thirty grains;

Mix the whole carefully together, and then divide the powder into twelve papers, one of which may be given night and morning, as above.

The quantity of rhubarb in the firſt powder muſt be ſo directed as to keep the body only gently open.

The doſes of the different preſcriptions may be varied according to the age of the invalid.

Recollect, only one plan of preſcription is to be adopted at a time.

Particular attention ſhould alſo be paid to the nurſe's milk ; if its nature be too poor, it will be neceſſary to procure another, or to ſubſtitute cow's milk.

If the child be accuſtomed to feed during the time of ſucking, Semolina forms the beſt food, on account of its very rarely acquiring an Acid ferment, even in the ſummer months; an object of great importance to a conſtitution already abounding with an Acid principle. When the infant is weaned, cow's milk, light animal broths of mutton or beef, with puddings of ſemolina, rice, or bread, ſhould form the plan of diet, accuſtoming the child to ſuck occaſionally a cruſt of bread; while thin barley water, or toaſt and water, ſhould be the regular diluters.

Animal food ſhould not be allowed, until a ſufficient number of teeth are paſſed to enable the child to maſticate; or it will be carried into the ſtomach in a ſtate only to be ſuperficially acted on by the ſolvent power, and conſequently afford inconſiderable nouriſhment; but not being digeſted, may lay the foundation of diſeaſes of the ſtomach and bowels. When the uſe of animal food is firſt introduced, it ſhould be carefully minced, to obviate the inconveniences mentioned, and mixed with crumbled bread moiſtened by the ſimple juices of the meat; or rice plainly boiled may be mixed with the animal food inſtead of bread. Mutton is beſt adapted for the ſupport of children, on account of its mild nutritive qualities, and eaſe of digeſtion. It is not my intention, by recommending one kind of animal food, to exclude all others; on the contrary, as a more advanced age is obtained, ſo a variety may be diſcretionally indulged. But in this particular habit, whatever animal food is allowed, all vegetables ſhould be avoided at the regular principal meal, except potatoes of the mealy kind, on account of the nouriſhment they afford; for every other ſpecies of vegetable yields very little ſupport, and are all capable of fermentation, and conſequently of producing an acid in the proceſs of digeſtion, which muſt be avoided; it being our duty ſo to direct the nature of the food, as to produce a chyle, rather of an alkaleſcent than an acid tendency.

Pure water, with or without toaſted bread, is the moſt beneficial fluid to youth; for it not only corrects the putridity of the fluids, but acts as a ſudorific. After the principal meal, when there are great marks of general debility, and weak digeſtive powers, a ſmall portion of port wine is recommended, as a promoter of digeſtion, from the reaſon we have to believe the proceſs a vinous fermentation.

By perſevering in this plan of diet, with the occaſional aid of the few medicines directed, the exciting cauſe of theſe complaints will be generally ſo eradicated, as to enable Nature to perform her future operations reſpecting the teeth, without defect; and likewiſe remedy the defective formation of the bones of the ſkeleton, which are always proportionably affected by the action of the prevalent acid.

If theſe morbid ſymptoms ariſe after the fourteenth year, which is the period, except in unnatural inſtances, in which Nature finiſhes the formation of the ſecond ſet, they are to be treated as local complaints, unleſs they have their ſource from a ſcorbutic habit, acquired by long voyages, the internal uſe of mercury, the malignant ſmall pox, or meaſles.

In what conſiſts the power of the ſmall pox or meaſles to produce theſe effects? Is the nature of the ſalivary ſecretion changed by their deleterious principles?

Should pernicious compoſitions have given riſe to the complaints, the cure will conſiſt in the diſcontinuance of their cauſe; and in applying ſuch medicines as will counteract their effects, and as far as the caſe will admit, reſtore Nature to herſelf. For it muſt be obſerved, that when theſe complaints are not attended to at their commencement, Art is ſometimes deficient in her reſources to remove them.

When they are the effects of a ſcorbutic habit, the cure muſt be directed to the conſtitution; and while the general ſtate of health is attended to, the teeth and gums are to be locally treated.

In this diſeaſe the blood is diſſolved by a putrid acrimony; now, if the blood be thus affected, all the other fluids will partake of the ſame principle; and with the reſt, the ſalivary ſecretion becomes diſeaſed. This probably accounts for the morbid affections of the gums, the looſeneſs and frequent caried ſtate of the teeth in this diſeaſe.

In the renewal of the enamel of the teeth, the greateſt inability is acknowledged; the growth of it is confined to the limits of our twentieth year; and after that period is not renewable by any device of man.

It is from this cauſe the ungloſſed whiteneſs I have juſt deſcribed, occurring in ſome caſes, admits of no remedy; becauſe it ariſes from a deſtruction of the exterior poliſhed lamina of the enamel. All we can accompliſh in this inſtance is to ſave the ruined teeth from farther deſtruction, by counteracting the effects of thoſe applications by which their decay was produced.

That theſe ſalutary effects are to be produced from the uſe of my Vegetable Dentifrice, an extended ſale has fully confirmed, and repeatedly proved, that no greater medical virtues are attributed to it than the uſe will in general juſtify.

Practical knowledge alſo enables me to add, that the uſe of this Vegetable Powder will prevent the ill effects of mercurial alteratives on the teeth and gums during their adminiſtration.

It is my peculiar wiſh to be underſtood by this elogy to be applauding the operations of Nature, and not myſelf, ſince theſe ſalutary effects are produced by her own appointed laws, which, to the reflecting mind, will not appear myſterious.

To the implanted principles of Nature in the vegetable kingdom, the medical profeſſor ſtands more highly indebted than to the ingenuity of man; for though the latter has raiſed the reputation of the healing art, by preparations of Antimony and Mercury, yet the former has more bountifully ſtrengthened his hand. Of this truth the Materia Medica is an eminent example; its richeſt ornaments being the productions of the vegetable kingdom. Yet think not, gentle Reader, from the preſent diſcoveries, that the ſtore of Nature is exhauſted; or, that the extent of human life is equal to the diſcloſure of the arcana of the vegetable world.

Providence often ſays to the enquiring mind, exulting in its reſearches, "Thus far ſhalt thou go, and no farther!" Thus the inquiry into Nature proceeds from generation to generation, and the ſurvivor wiſely avails himſelf of all the ſtudy and knowledge of his predeceſſors.

END OF PART THE FIRST.

PART II.

OBSERVATIONS

ON THE

USES AND DISEASES

OF THE

SALIVA.

THE

USES OF THE SALIVA.

THE Salivary ſecretion is intended by Nature to anſwer ſeveral neceſſary and beneficial purpoſes in the regulation of the animal œconomy.

The following intentions are ſelected as the moſt eminent:

To lubricate the mouth and throat by a regular ſupply of innocent fluid, with the view of obviating the uneaſineſs which would otherwiſe ariſe in thoſe parts from conſtant motion; as well as to moiſten our food in the act of maſtication. During this proceſs the ſaliva is intimately blended with our nouriſhment, and carried with it into the ſtomach, where it becomes a probable ſolvent power to haſten the proceſs of digeſtion.

Have we not ſome reaſons to ſuppoſe the proceſs of digeſtion may be either impaired or promoted, according to the nature of this ſecretion?

THE
DISEASES OF THE SALIVA.

THE ſaliva, like all the other ſecretions, is liable to various diſeaſes.

In a naturally healthful ſtate it is a mild and bland fluid.

When it deviates from a ſtate of healthful nature, the ſecretion acquires either an acid or alkaline quality.

In quantity it is alſo obſerved frequently to be irregular.

It is likewiſe liable to concretions, which are remarked to be either of a yellow, brown, or black colour. Theſe concretions differ not only in colour, but in conſiſtence; in ſome inſtances they are hard; and in others they are of a ſoft or glutinous nature.

The ſubſequent Remarks are introduced to prove the Deviations of the Saliva from a natural State.

Numberleſs inſtances ariſe in the infant ſtate to prove the change of the ſalivary ſecretion from a very bland, to an acid nature, which is ſometimes even ſo corroſive, as to excoriate the parts on which it drips. At the ſame age alſo every mother can prove the ſecretion to be frequently ſuper-abundant.

Of the offending acrimony and quantity of the ſaliva, inſtances are continually occurring in the practice of medicine at a much later period of life; of which it is in my power to relate ſeveral eminent examples; but to produce them in this place appears unneceſſary, as the former are ſufficient proofs of its deviations from a natural ſtate.

That it alſo acquires an alkaline quality is demonſtrable from the frequent alkaline taſte in the mouths of thoſe who have, from neceſſity, ſubſiſted for a length of time on food of an alkaleſcent nature, without the admixion of aceſcents. Nor can this be wondered at, ſince the nature of all the fluids depends on that of the blood.

The different genera of ſalivary concretions appear to be the produce of different habits, depending on ſome prevalent principle.

For inſtance, the ſcrophulous are moſt commonly ſubject to the yellow concretion; where an acid prevails, the hard concrete generally forms; while the habit abounding with an alkaline principle, uſually generates the ſoft and glutinous ſpecies, which is of a putrid nature.

The hard concrete is ſoluble in wine; the ſolvent power depends on the acid nature of the liquor. The ſoft and glutinous kind emits a very diſagreeable fetor when expoſed to the heat of a candle.

Since daily proofs ariſe of individuals never generating matter of this kind, it is evident, that every conſtitution cannot produce the calculus on the teeth, but that there muſt be a particular diſpoſing cauſe neceſſary to accumulate it.

Whether this is a local or a conſtitutional complaint, we have not as yet fully aſcertained. Future obſervations may enable me, or ſome much more ingenious enquirer, to determine the queſtion. My own obſervations authorize me only to obſerve, that ſuch habits as are ſubject to biliary or urinary concretions, are very ſeldom without thoſe of the ſaliva; at the ſame time the complaint is frequently obſerved, where neither biliary nor urinary concretions were ever diſcovered to have formed.

The probable Proceſs of forming Salivary Concretions.

Reſpecting the mode adopted for the creation of this concrete, no poſitive account can be given; yet there are reaſons for ſuppoſing it may be accompliſhed in the following manner:

The ſaliva, during a ſtate of ſleep, acquiring a glutinous quality, adheres to the teeth from the inactivity of the tongue and jaws, while thoſe parts are at reſt. And when a foundation of concreted matter is once laid, freſh lamina are poſſibly formed by the concrete attracting particles of a nature ſimilar to itſelf.

From the ſordes collected in a greater or leſs degree on the teeth in the night, ſo viſible in the generality of mankind, on their firſt riſing; notwithſtanding the mouth and teeth are carefully cleanſed from the remnants of food, before reſt is taken; we demonſtrably prove that a certain proceſs does take place in this ſtate of inaction, yet it would be imprudent to aſſert the proceſs as mentioned above to be the exact one followed by Nature.

THE
EFFECTS OF SALIVARY CONCRETIONS.

THESE concretions do not appear to poſſeſs any very injurious principle, by which they deſtroy the enamel of the teeth.

The hard concrete is certainly inert matter.

If the teeth ſuſtain any injury from them, it moſt probably ariſes from the ſoft and glutinous kind, on account of its affinity to a putrid acrimony.

Their baneful mode of operation conſiſts in ſeparating the gums from the neck of the teeth, by which the fangs or roots are looſened in their alveory proceſſes; by this effect air is admitted, and lays the foundation of future diſeaſes, too often admitting of no remedy.

The beauty of the teeth is not only deſtroyed by a concreted ſaliva, but when the accumulation is conſiderable, the gums are rendered fungous, fætid, and ſwelled; while the breath becomes offenſive, and is rendered particularly ſo by the putrid nature of the ſoft and glutinous kind.

THE EXCITING CAUSE.

WE are induced from particular reaſons to attribute the cauſe of ſalivary concretions to an Acid Acrimony in the conſtitution.

This principle will derive its origin from an aceſcent diet, a diſeaſed ſolvent power, and a debility of the ſtomach and organs of digeſtion.

Practice confirms us in the opinion, that an Acid ferment in the proceſs of digeſtion, by changing the natural qualities of the chyle, debilitates the nervous power, and deranges the conſtitution in general.

Though we know the office of digeſtion conſiſts in deſtroying the texture of the ſeveral kinds of food, and to render it miſcible with the fluids, yet it muſt be allowed, the theory of the proceſs remains in obſcurity; it being yet undetermined whether it conſiſts in attrition, or a ſolvent power, though the latter opinion is by far the moſt probable.

However, the uncertainty of the proceſs throws no obſtacle in our way to prevent a decided opinion being given, if the chyle be formed, owing to an imperfect digeſtive power, with any particular prevalent principle, for inſtance, an Acid one, that the blood, and all the ſecretions, muſt abound with the ſame.

Hence, then, a diſeaſed ſaliva is evident; which may be ſaid to produce pernicious effects in a twofold capacity; firſt, as a ſolvent power in the ſtomach; and ſecondly, by forming concretions on the teeth.

MODES OF CURE.

THE general practice adopted for the removal of ſalivary concretions, conſiſts in ſcaling of the teeth; an operation which experience invariably demonſtrates to be only capable of affording temporary relief.

The many inſtances I have, with great ſenſibility, witneſſed in the courſe of practice, in which the teeth never ſteadily faſtened in their alveory proceſſes, after ſcaling, in particular habits, have convinced me, that the operation poſſeſſes the power to produce effects highly detrimental to the health of the teeth; particularly when it is either too frequently or indiſcriminately performed.

Nor does the too-prevailing cuſtom of the moſt eminent Dentiſts uſing an Acid compoſition of ſome kind or other after the operation, merit leſs reproof than the frequency or indiſcriminate uſe of the operation itſelf. For though it muſt be allowed, that the practice tends to render the teeth more delicately white for the moment, and to evince the ſkill of the operator the better; yet it muſt be confeſſed, that it produces diſcolourations of them after a certain time, and conſequently haſtens the neceſſity of recurring to the aid of his art.

Experimental knowledge has induced

me to ſpeak with this freedom reſpecting the abuſe of ſcaling, in hopes the operation will be confined for the future to the hands of the ſkilful and judiciouſly thinking.

The ſubject for the preſent will be hinted at only in this curſory manner, ſince it is my intention, at ſome future time, to trouble the Public with more enlarged obſervations on the effects of the operation.

However, to prevent the miſapplication of ſcaling as much as poſſible for the preſent, I ſhall beg leave to point out, that the practice is moſt requiſite, when the accumulation of concreted ſaliva detaches the gums from the teeth, or when apprehenſions are entertained of their becoming fungous, fœtid, or ſwelled from it.

The gentle Reader will excuſe her being reminded, in cloſing theſe obſervations, that ſcaling ſhould never be yielded to, becauſe faſhion has adopted the cuſtom, leſt a too eaſy ſubmiſſion to a faſhionable error ſhould repay her by an early loſs of the teeth.

Since it is univerſally allowed, even by the greateſt advocates for the operation of ſcaling, that it cannot eradicate the exciting cauſe of theſe concretes, it is evident the cure ought to be more rationally attempted.

As there is an acknowledged diſpoſition in certain human bodies to create biliary or urinary concretions, ſo am I perſuaded there is a principle in particular habits to produce ſalivary; which diſpoſition may be counteracted by a local and conſtitutional treatment.

The following methods having ſucceeded with me, they are with pleaſure communicated for the benefit of mankind in general.

The local treatment conſiſts in the regular uſe of my prepared *Plant*, which has received the public ſanction for its ſpecifically preventing accumulations of concreted ſaliva on the teeth, without producing the leaſt injury to their enamel, while it acts as a tonic on the gums.

The conſtitutional treatment is adviſed

when the Acid Acrimony has gained an aſcendancy in the habit ſo powerful, as to derange the functions of the organic parts of the ſyſtem. For ſuch a principle acts not leſs deſtructively on the adult, than on the infant; in both inſtances it tends to depreſs the nervous power, and to weaken the texture of the blood.

The general ſymptoms of a prevalent Acid in the habit, are languor, debility, paleneſs of countenance, troubleſome ſalivary concretions, acid eructations and vomitings, irregular ſpaſmodic pains at the pit of the ſtomach, and diſtenſions of the ſtomach and bowels after the principal meal.

From this deſcription of the diſeaſe,

the Reader will be enabled to judge when the following plan is requiſite.

The firſt ſtep towards a cure conſiſts in throwing off the Acid contents of the ſtomach by a gentle vomit, if its prevalency be conſiderable.

From five to ten grains of Ipecacuanha in powder will anſwer the purpoſe; and the morning, before any food is taken, will be recommended as the beſt, adapted time for the operation, during which great quantities of fluids ſhould be avoided.

Should the bowels be irregular in the performance of their duty, after the operation of the vomit, let them be occaſionally aſſiſted by ſuch doſes of Rhubarb or Aloes as are adapted to the nature of the habit.

When the ſtomach and bowels are thus cleared, the invalid is recommended to drink regularly in the courſe of a day a pint of Mephitic Water, and to take one or other of the following preſcriptions two hours before, and after the principal meal.

Take of the cold infuſion of Bark two ounces; Prepared Natron, three or five grains; Tincture of Cardamons, twenty drops. Mix, as a doſe for an adult.

Or, take of Vitriolated Iron two or four grains; pure cold water, two ounces; Compound Tincture of Gentian, one drachm. Mix as above.

When the diſtenſions of the ſtomach and bowels are prevalent, the following medicine is extremely beneficial.

Take of Camphorated Mixture, one

ounce and a half; Powdered Camomile Flowers, five grains; Aromatic Powder, two grains. Mix, to be taken as above*.

But the attention muſt not be wholly confined to the medical treatment.

For the perfect recovery of health, it will be neceſſary to recommend a ſteadineſs in the purſuit of gentle exerciſe, conſiſting in the alternate uſe of walking, dancing, and horſe exerciſe, together with a plan of diet coaleſcing with the intentions of the medical one, or its effects will be counteracted.

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* Inſtructions to make the cold infuſion of Bark.

Take Bark in powder, one ounce;

Dried Seville Orange peel, cut into pieces, two drachms,

Pure cold water, one pint;

French Brandy, two or three ounces.

Infuſe theſe ingredients in a cloſed veſſel for four days, ſhaking it once every day. On the fifth day decant or filter the clear liquor for uſe.

A better plan of diet it is not in my power to adviſe, than that already propoſed for deſtroying the exciting cauſe of diſeaſed teeth in the earlier part of life; a proper allowance being made for the difference of years reſpecting the quantity of wine.

With regard to tea, in ſuch conſtitutions as feel no tendency to an acidity in the ſtomach, and the nervous ſyſtem appears to be refreſhed from its uſe, it would be unreaſonable to refuſe the fragrant liquor; but where an acidity is produced, and nervous affections follow the drinking of it, we preſume no ſenſible mind would pleaſe the palate at the expence of health.

May theſe lines prove of ſervice to the Fair, by guarding them againſt the too-thoughtleſs cuſtom of rejecting the uſe of animal food, from principles of delicacy, and ſubmitting in general to an aceſcent diet. Since it has been demonſtrated to them that vegetables, generally ſpeaking, defeat the purpoſe of wholeſome nouriſhment to the conſtitution, by deranging the proceſs of digeſtion, by which the powers of life are debilitated, and you are rendered the victims of nervous diſeaſes.

FINIS.